Monitoring Data Record

Project Title: Cashiers (R-2224A) COE Action ID: 200230408
Stream Name: Unnamed tributary to the Thorpe Reservoir DWQ Number: 000536
City, County and other Location Information: Sta. 136+00LT on NC 107 N of Cashiers
Date Construction Completed: December 2003 Monitoring Year: (2) of 5
Ecoregion: 8 digit HUC unit 06010203
USGS Quad Name and Coordinates:
Rosgen Classification:
Length of Project: 948' Urban or Rural: Urban Watershed Size:
Monitoring DATA collected by: M. Green, J. Wait, D. Jenkins Date: 5/31/05
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Rd. Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@dot.state.nc.us
Consultant Information:
Name:
Address:
Telephone Number: Email address:
Project Status: Complete

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level (1) ~~2~~ ~~3~~
Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*
Permit States: NCDOT shall perform the following components of Level I monitoring twice each year for the 5 year monitoring period (summer and winter): Reference photos, plant survival, and visual inspection of channel stability. If less than two bankfull events occur during the first 5 years, NCDOT shall continue monitoring until the second bankfull event is documented. The bankfull events must occur during separate monitoring years. In the event that the required bankfull events do not occur during the 5 year monitoring period, the USACE, in consultation with resource agencies, may determine that further monitoring is not required.

Section 1. PHOTO REFERENCE SITES
(Monitoring at all levels must complete this section)

Attach site map showing the location and angle of all reference photos with a site designation (name, number, letter, etc.) assigned to each reference photo location. Photos should be provided for all structures and cross section locations, should show both banks and include an upstream and downstream view. Photos taken to document physical stability should be taken in winter. Photos taken to document vegetation should be taken in summer (at representative locations). Attach photos and a description of each reference photo or location. We recommend the use of a photo identification board in each photo to identify location.

Total number of reference photo locations at this site: 4 reference points, 2 photos at each

Dates reference photos have been taken at this site: 12/30/04, 1/05/05, 5/31/05

Individual from whom additional photos can be obtained (name, address, phone):

Other Information relative to site photo reference:

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

Section 2. PLANT SURVIVAL
Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):
The buffer area was mowed unintentionally, but will be replanted as soon as possible.

Estimated causes, and proposed/required remedial action:

ADDITIONAL COMMENTS: Woody vegetation is minimal along the streambank and in the buffer area but did include dogwood, rhododendron, tulip poplar, northern red oak, white pine, red maple, green ash, and various grasses.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

Bank failures are noted in photos 6, 7, and 9. These bank failures are due to the driveway culvert being undersized for the amount of water flowing during last years large rain events and the lack of woody vegetation on the streambanks. A large tree across stream just past (Photo 4) noted last monitoring period was removed. The Office of Natural Environment is in the process of setting up funds to repair the streambank failures, replant the streambank and buffer area, and replace the culvert.

Date Inspected	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					

NOTE: Attach separate narrative sheets to each monitoring report describing/discussing the overall monitoring results. Include the identification of specific problem areas/channel failures, estimated cause and proposed/required remedial action. This should include a brief discussion of any parameter that has changed significantly from as-built.

Cashiers Stream

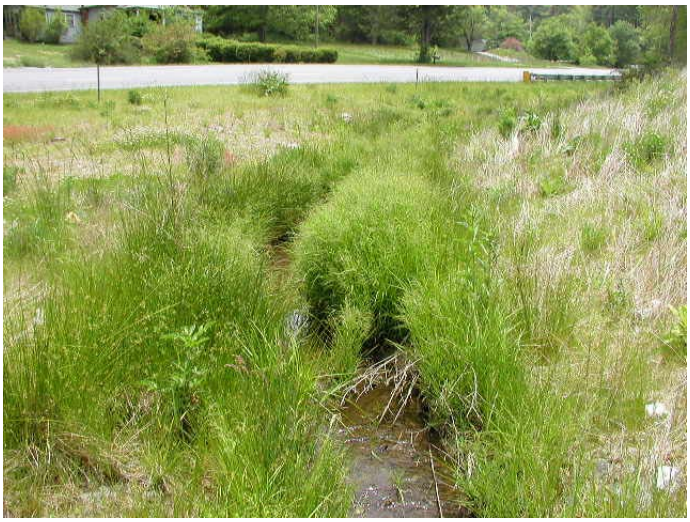

Photo 1

Photo 2

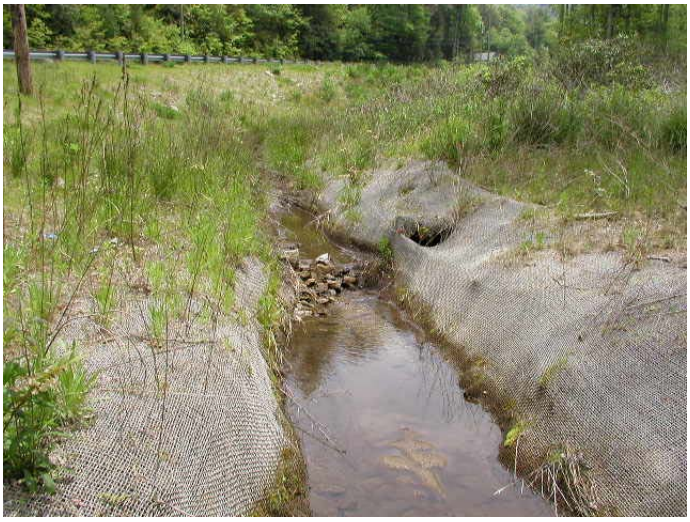

Photo 3

Photo 4

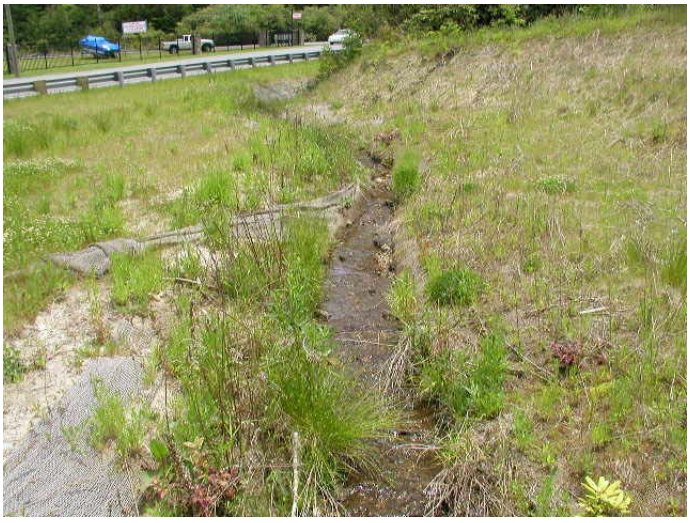

Photo 5

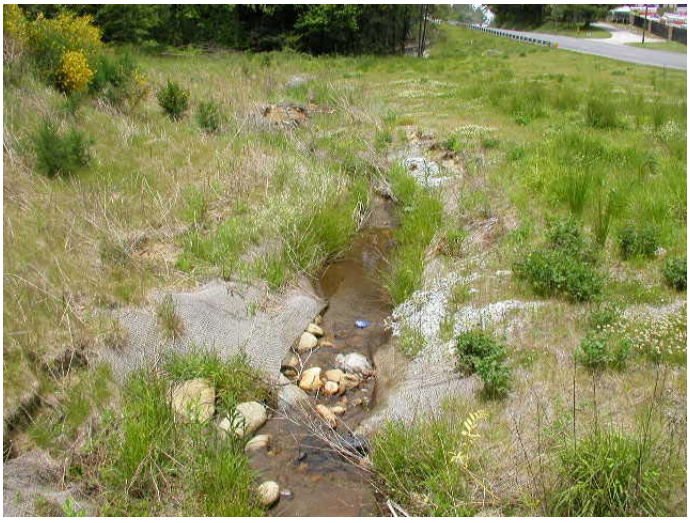

Photo 6

Year 2 - May 2005

Cashiers Stream

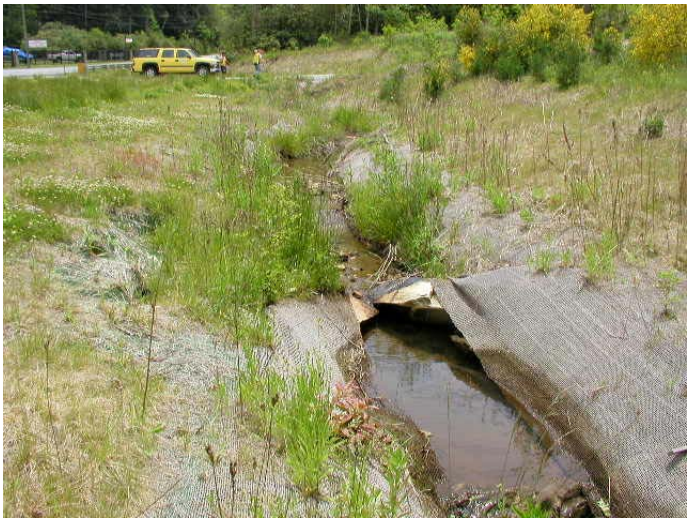

Photo 7

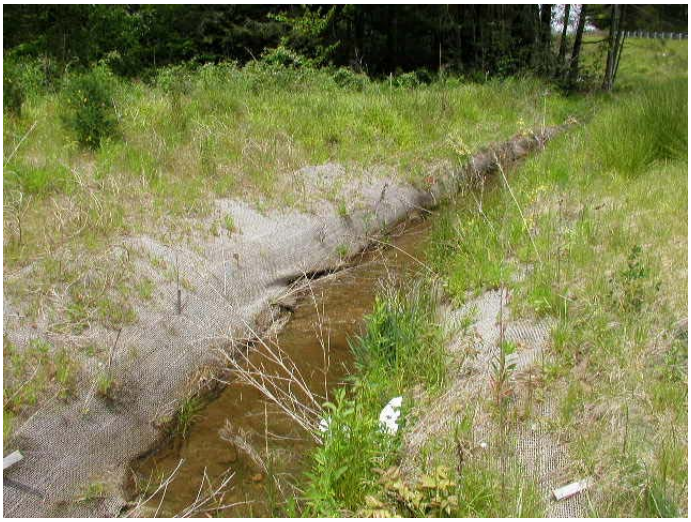

Photo 8

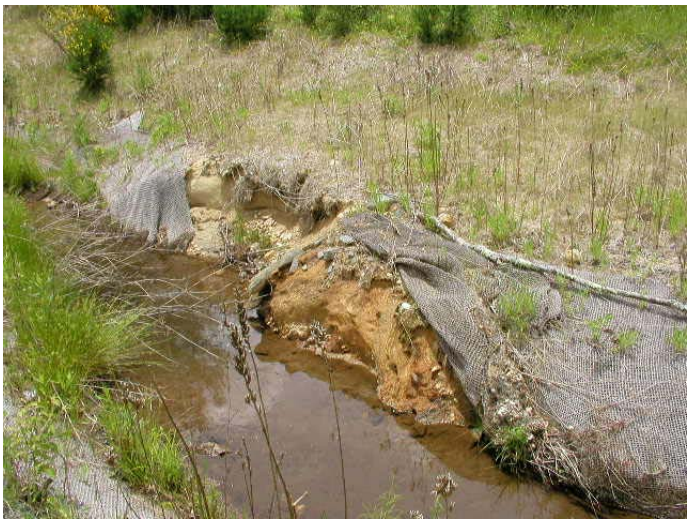

Photo 9 (bank failure)